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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,676	11/25/2003	Lloyd G. Ratchford	111418.00420	6269

27557 7590 05/27/2004

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EXAMINER

TA, THO DAC

ART UNIT PAPER NUMBER

2833

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/720,676	Applicant(s) RATCHFORD, LLOYD G. <span style="float: right;">OK</span>	
	Examiner Tho D. Ta	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/10/04</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-6 and 8 are objected to because of the following informalities: claim 1, line 8, change "then" to --than--; claim 4 should end with a period (.); claim 8 should depend from claim 7. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over de La Cruz et al. (6,616,482) in view of Saito et al. (6,428,364).

In regard to claim 1, De La Cruz et al. discloses a contact positioning assembly for a cable comprising: a plurality of contacts 11 attached to conductors 4 of an electrical cable 2, the conductors 4 secured in radially outward facing U-shaped slots 35 of a first spacer 34 for positioning the conductors 4, the number of slots 35 corresponding to the number of conductors 4 so that each slot 35 holds a single conductor 4 (column 4, lines 33-37); wherein the first spacer 34 is generally cylindrical-shaped with the slots 35 equally spaced around its circumference.

However, De La Cruz does not disclose that the slots 35 are sized smaller than an outside diameter of the conductors 4 so as to provide a frictional interference

between the slots 35 and conductors 4 for securely holding the conductors 4 in the slots 35.

Saito et al. discloses that the slots 53, 54 are sized smaller than an outside diameter of the conductors 50 so as to provide a frictional interference between the slots 53, 54 and conductors 50 for securely holding the conductors 50 in the slots 53, 54, thereby facilitating pressure-welding work of the conductors 50 (column 9, lines 10-15):

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify De La Cruz et al invention by constructing the slots as disclosed by Saito et al. in order to facilitate the coupling of the conductors and thus the assembling time of a worker would be reduced.

In regard to claim 2, De La Cruz et al. discloses that there are four slots 35 and four conductors 4:

In regard to claim 3, De La Cruz et al. discloses that a base portion of the first spacer 34 engages rings 26 on the contacts 11 to prevent the contacts 11 from sliding.

In regard to claim 4, De La Cruz et al. discloses that the slots 35 are separated by walls 44, the walls 44 extending above the slots 35 and abutting a cable ferrule 10, the ferrule 10 securing the first spacer 34 between itself and the rings 26.

In regard to claim 5, De La Cruz et al. discloses that a second spacer 24 that slides over the contacts 11 and is positioned adjacent the first spacer 34.

In regard to claim 6, De La Cruz et al. discloses that the first spacer 34 is made of a dielectric material to provide electrical shielding.

In regard to claim 7, De La Cruz et al. discloses a spacer for positioning conductors 4 of an electrical cable 2 comprising: a generally cylindrical spacer 34 having U-shaped slots 35 equally spaced around the circumference of the spacer 34, the slots 35 having openings facing radially outward and the slots 35 being adapted to hold a single conductor 4 (column 4, lines 33-37).

However, De La Cruz does not disclose that the slots 35 being dimensioned slightly smaller than the diameter of the conductors 4 so as to provide frictional interference to hold the conductors 4.

Saito et al. discloses that the slots 53, 54 are sized smaller than an outside diameter of the conductors 50 so as to provide a frictional interference between the slots 53, 54 and conductors 50 for securely holding the conductors 50 in the slots 53, 54, thereby facilitating pressure-welding work of the conductors 50 (column 9, lines 10-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify De La Cruz et al invention by constructing the

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slots as disclosed by Saito et al. in order to facilitate the coupling of the conductors and thus the assembling time of a worker would be reduced.

In regard to claim 8, De La Cruz et al. discloses that the spacer 34 is made of a dielectric material.

In regard to claim 9, De La Cruz et al. discloses that the slots 35 are separated by walls 44 that extend above the slots 35, a top portion of the walls 44 being adapted to abut a cable ferrule 10 and a base portion of the spacer 34 adapted to abut contact rings 26, wherein the spacer 34 is secured between the cable ferrule 10 and contact rings 26.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**THO D. TA**  
**PRIMARY EXAMINER**

tdt  
05/25/04